

WHAT IS CLAIMED IS

- Sub 61)* 1. Method for the removal of dirt by means of steam and a cleaning agent, which method comprises the steps of supplying cleaning agent and mixing it with the steam, and bringing the mixture into contact with the dirt to be removed, wherein the cleaning agent is injected into the steam and is brought into contact in a gaseous state with the dirt to be removed.
2. Method according to claim 1, wherein the steam and the cleaning agent are supplied separately to an application device, the injection of the cleaning agent into the steam being carried out in or near the application device.
3. Method according to claim 2, wherein the cleaning agent is preheated prior to the injection.
4. Method according to claim 3, wherein the cleaning agent is preheated by heat exchange with the steam.
5. Method according to claim 1, wherein the steam is at a pressure of less than 10 bar.
- Sub 62)* 6. Method according to claim 1, wherein the temperature of the steam lies in the region of 120-160°C.
7. Method according to claim 1, wherein the dirt to be removed is pretreated with steam prior to bringing the gaseous mixture of steam and cleaning agent into contact with the dirt.
8. Method according to claim 1, wherein the treated dirt is collected by suction.
- Sub 63)* 9. Method according to claim 1, in particular for the removal of chewing gum residues, wherein the cleaning agent is an aqueous solution that comprises phosphate compounds, comprising at least a combination of orthophosphate, polyphosphate and pyrophosphate, and also at least an anionic surfactant, a non-polar organic solvent and an emulsifier.
10. Method according to claim 1, wherein the ratio of steam to cleaning agent is in the region of 4-8:1, preferably approximately 6:1.
11. Device for the removal of dirt by means of steam and cleaning agent, in particular a low-pressure steam cleaner comprises a water supply container, a first pump connected to the water supply container, a steam generator for converting water into steam, having a supply line connected to the first pump and having a discharge line for the discharge of steam, a stock container for cleaning agent,

which is connected to a second pump, and an application device which is in communication with the discharge line of the steam generator, and also regulating means for supplying steam or cleaning agent to the application device, wherein the discharge line of the second pump is connected to the discharge line of the steam generator by means of connecting means in such a way that during operation injection of the cleaning agent into the steam occurs and the connecting means and application device are designed in such a way that during operation a gaseous mixture of steam and cleaning agent is delivered by the application device.

12. Device according to claim 11, wherein the discharge line of the second pump is connected to one end of a line for cleaning agent, the other end of which line opens out by way of an aperture with smaller dimensions than the line for cleaning agent into a steam line, which connects the steam generator to the application device.

13. Device according to claim 12, wherein the line for cleaning agent and the steam line are in a heat-exchanging relationship with each other upstream of the abovementioned aperture.

14. Device according to claim 13, wherein the line for cleaning agent and the steam line are formed by compartments of a flexible hose containing at least two compartments, the compartment for cleaning agent preferably being provided with a one-way valve at the end.

15. Device according to claim 14, wherein connecting lines for the control of the regulating means by operating members are provided in a further compartment, which operating members are provided in a handle of the application device.

16. Device according to claim 11, wherein the application device is provided with a suction nozzle for sucking up steam and dirt that has been removed, which suction nozzle is in communication with vacuum means by way of a suction line.

17. Device according to claim 16, wherein the vacuum means comprise a vacuum pump with low flow and high vacuum.

18. Device according to claim 16, wherein the application device comprises a spray head, a suction nozzle of the suction means being disposed at one side of the spray head.

19. Device according to claim 16, wherein the end of the spray head extends beyond the end of the suction nozzle.

20. Device according to claim 16, wherein the vacuum pump is connected to a separating chamber for separating dirt and water, on

the one hand, and air, on the other hand.

21. Device according to claim 16, wherein a collection container is further provided, for collection of the separated dirt and water, which container is connected to the separating chamber.



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